

### REMARKS

This application has been reviewed in light of the Office Action dated April 22, 2003. Claims 1-23 are presented for examination, and have been amended to define still more clearly what Applicant regards as his invention. Claims 1, 12, and 23 are in independent form. Favorable reconsideration is requested.

Claim 9 was rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which allegedly was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is mostly nearly connected, to make and/or use the invention.

Applicant respectfully traverses this rejection. In the paragraph setting out this rejection, the Examiner states that the redundancy-removing step of obtaining similarity degrees concerning agreement degrees of the physical structure is not described in the specification. Applicant respectfully points out that this aspect of claim 9 is based on Step 601 of Figure 6, and the description from page 9, line 18, through page 10, line 4.

Accordingly, withdrawal of the rejection under Section 112 is respectfully requested.

Claims 1-23 were rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patent No. 5,583,762 (*Shafer*) in view of U.S. Patent No. 6,161,084 (*Messerly et al.*).

As shown above, Applicant has amended independent claims 1, 12, and 23 in terms that more clearly define what they regard as their invention. Applicant submits that these amended independent claims, together with the remaining claims dependent thereon, are patentably distinct from the cited prior art for at least the following reasons.

The present invention is directed to generating a document type definition of a structured document. When a document is prepared by a plurality of users and if the individual users use tags having arbitrary titles, there is the possibility of attaching different tag names to the same document element, or conversely attaching the same tag name to different elements. Thus, the semantic information attached to the tag cannot be correctly handled, and redundancy is generated with respect to the tag.

The aspects of the present invention respectively set out in independent claims 1, 12, and 23 address the foregoing problem by generating a document type definition that correctly treats semantic information given to the tags, and removing any redundancy to the tags.

The aspect of the present invention set forth in claim 1 is a document type definition generating method for generating a document type definition of a structured document provided with tags, each tag having an element name for each document element. The method includes judging the similarity between the physical structures of each of the document elements in the structured document, judging the similarity between the semantic structures of each of the tags, by comparing the form of each tagged element, judging the similarity of the tags based on the judgment results of the physical structure judging step and the semantic structure judging step, and generating the document type definition which unifies the element names of the similar tags.

Important features of claim 1 are judging the similarity between the physical structures of each of the document elements in the structured document, and judging the similarity between the semantic structures of each of the tags, by comparing the form of each tagged element. Support for the physical structure judging step/means can be found on page 7,

line 16, to page 18, line 2. Support for the amendment concerning the semantic structure judging step/means can be found on page 8, lines 3-11.

The applied art, alone or in combination, is not seen to disclose or suggest the method as defined by independent claim 1, particularly with respect to judging the similarity between the physical structures of each of the document elements in the structured document, and judging the similarity between the semantic structures of each of the tags, by comparing the form of each tagged element.

*Shafer* relates to a method for generating a grammar for a collection of sample document records and to a process for reducing the number of rules of such grammars. *Shafer* merely matches a “start tag” with the corresponding “end tag”, as described on column 3, lines 14-29. However, nothing has been found in *Shafer* that would teach or suggest judging the similarity between the physical structures of each of the document elements in the structured document, as recited in claim 1.

Accordingly, Applicant believes that claim 1 is clearly allowable over *Shafer*, taken alone.

*Messerly et al.* relates to the field of information retrieval tokenization. *Messerly et al.* is cited in the Office Action as overcoming the deficiencies of *Shafer*, and in particular disclosing parsing both indexed and query text to perform lexical, syntactic, and semantic analysis of the input text (column 2, lines 58-65). However, nothing has been found in *Messerly et al.* that would teach or suggest judging the similarity between the semantic structures of each of the tags, by comparing the form of each tagged element, as recited in claim 1.

Accordingly, claim 1 is believed clearly allowable over *Shafer* and *Messerly et al.*, taken separately or in any proper combination.

Independent claims 12 and 23 are apparatus and computer-readable storage medium claims, respectively, corresponding to method claim 1, and are believed to be patentable for at least the same reasons as discussed above in connection with claim 1.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

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